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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,680

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EXAMINER

ZHENG, LOIS L

ART UNIT

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1793

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/783,680	Applicant(s) ASOU ET AL.	
	Examiner LOIS ZHENG	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/30/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. No changes to the claims are made in view applicant's response filed 30 January 2008. Therefore, claims 1-7 are currently under examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claims recite "a transparent conversion coating" as a finishing treatment. However, the instant specification does not mention whether or not the conversion coating produced by the finishing treatment is transparent. In addition, JP S42-14050 provided by the applicant is not sufficient to show that the conversion coating produced by the claimed finishing treatment is transparent because JP S42-14050 teaches that a transparent film would only form with specific amounts of chromium and silica, and extra presence of the coating components would cause coloring (page 1 of the translation provided by the applicant). Furthermore, JP S42-

14050 is not part of the instant specification. Therefore, JP S42-14050 does not support the claimed transparent conversion coating

Therefore, the newly amended term "transparent" constitutes new matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/07902(WO'902), in view of JP 8-983(JP'983), and further in view of Bradley US 5,704,995 A(Bradley).

WO'902 teaches a method of treating steel surfaces, comprising:

- a. Plating the steel surface with zinc (page 13, first paragraph),
- b. Activating the zinc plated surface with nitric acid containing solution (page 13, first paragraph),
- c. Rinsing the activated zinc plated surface (page 13, first paragraph),
- d. Treating the activated zinc plated surface with a trivalent chromium containing solution to form a black coating that is free of hexavalent chromium, wherein the Cr(III) solution further comprises iron and silica (page 8, last two paragraphs),
- e. Rinsing the Cr(III) treated zinc plated surface (page 13, first paragraph),

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f. Treating the Cr(III) treated zinc plated surface with a silica containing solution (page 9, first paragraph; page 10, second paragraph; page 13, first paragraph), and

g. Drying the Cr(III) treated zinc plated surface (page 13, first paragraph)

However, WO'902 does not teach that its second conversion treatment step (i.e. treatment using a silica containing solution) uses a solution comprising trivalent chromium and silica and produces a transparent coating as claimed.

JP'983 teaches treating zinc plated surfaces with a coating solution comprising trivalent chromium, silica, phosphoric acid and metal ions such as cobalt, wherein the treatment method process produces a transparent conversion coating with excellent anti-corrosion properties and improved appearance (abstract, col. 2, lines 2-5; col. 3 lines 42-44, col. 8 lines 7-8).

Bradley teaches a method for forming a black coating on a metal surface, wherein after the metal surface is treated with a blackening solution, the metal surface is further treated with a Cr(III) containing solution for enhanced corrosion resistance (col. 2 line 58 – col. 3 line 7).

Regarding claims 1 and 4-6, it would have been obvious to one of ordinary skill in the art to have incorporated the coating treatment as taught by JP'983 into the second conversion treatment step of WO'902 in order to enhance corrosion resistance and improve appearance as taught by Bradley and JP'983.

6. Claims 2-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'902 in view of JP'983 and Bradley, and further in view of Hartley et al. US 4,243,434(Hartley).

The teachings of WO'902 in view of JP'983 and Bradley are discussed in paragraph 6 above. However, WO'902 in view of JP'983 and Bradley do not explicitly teach the additional treatment step with a solution comprising trivalent chromium and silica prior to the black coating step.

Hartley teaches coating of metal working tools with a chromium containing coating solution(abstract). Hartley further teaches that multiple coating applications can be carried out when thicker coating is desired(col. 2 lines 29-33). Based on the thickness produced by Hartley's single coating layer(0.0001 or 0.0002 inch) and final desired thicker coating layer(0.001 inch), the coating treatment have to be repeated for at least five times to reach the desired coating thickness.

Regarding claims 2 and 7, one of ordinary skill in the art would have found it obvious to have repeated the black coating forming and rinsing steps in the process of WO'902 in view of JP'983 and Bradley in order to achieve a desired thicker black coating as taught by Hartley. In addition, since the black coating treatment step of WO'902 in view of JP'983, Bradley and Hartley comprises Cr(III), silica and iron, the repeated black coating forming steps in the process of WO'902 in view of JP'983, Bradley and Hartley meet the limitations of the first black coating step using a solution comprising Cr(III) and silica and the second black coating step using a solution comprising Cr(III) and iron as claimed.

Regarding claim 3, one of ordinary skill in the art would have also found it obvious to have repeated the transparent coating forming step of WO'902 in view of JP'983, Bradley in order to achieve desired transparent coating thickness as taught by Bradley. In addition, since the transparent coating treatment step of WO'902 in view of JP'983, Bradley and Hartley comprises Cr(III), silica and cobalt, the repeated transparent coating forming steps in the process of WO'902 in view of JP'983, Bradley and Hartley meet the limitations of the initial finish treatment step using a solution comprising Cr(III) and silica and the final finish treatment step using a solution comprising silica and cobalt as claimed.

Response to Arguments

7. Applicant's arguments with respect to claims 1-7 filed 30 January 2008 have been considered but they are not persuasive.

In the remarks, applicant argues the rejection under 35 USC 112, second paragraph is improper since a solution containing inorganic salt, organic acid, trivalent Cr and silica is conventionally transparent and JP S42-14050 supports this.

The examiner does not find applicant's argument persuasive. The color of the Cr protective coating depends upon the amount of each coating components in the coating solution. JP S42-14050 also teaches that excess component concentration would generate color in the coating film(bottom of page 1 of the translation provided by the applicant). Therefore, since the instant specification does not literally recite that the second chromium and silica coating is transparent, the examiner cannot determine if the second conversion coating solution contain sufficient Cr (III) and silica to form a

transparent conversion coating. Since no clear support has been provided, the rejection under 35 USC 112, second paragraph is proper.

Applicant further argues that JP'983's Cr(III) and silica coating is not transparent due to the presence of phosphoric acid.

The examiner does not find applicant's argument persuasive since applicant had previously admitted that the coating of JP'983 is transparent. See applicant's response filed 2 October 2007. The English translation provided by the applicant submitted 2 October 2007 also shows that the Cr(III), silica and phosphoric acid containing coating solution produces a transparent coating layer.

Applicant further argues that the combination of WO'902 in view of JP'983 and Bradley would produce a bluish-yellow coating because the Cr(III), silica and phosphoric acid of WO'902 coating will react with iron and Cr(III) of JP'983.

Applicant's argument is not convincing since Applicant has not provided any factual evidence data to substantiate the allegation of a bluish-yellow coating. Therefore, applicant's argument is merely conclusive statement.

Applicant further argues that the instantly claimed invention provides synergistic and unexpected results.

The examiner would like to remind the applicant that any objective evidence such as unexpected result must be factually supported by an appropriate affidavit or declaration to be of probative value. See *In re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984) and MPEP 716.01(c). Evidence of unexpected properties may be in the form of a direct or indirect comparison of the claimed invention with the closest prior

art which is commensurate in scope with the claims. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) and MPEP § 716.02(d) - § 716.02(e). Since the proof of factual evidence is lacking in applicant's assertion of unexpected results, the examiner does not find the argument persuasive.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

LLZ
4/4/08